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ABSTRACT

The appropriateness of using time limits when measuring students' competence is questionable. This study assessed whether students who had failed the College Level Academic Skills Test (CLAST) could improve their performance if they were allowed additional time on retaking the test. Subjects were 641 students who took the CLAST from fall 1982 through fall 1986 at Miami-Dade Community College. Because standardized time allotments for completing the CLAST subtests could not be altered for the study, only students retaking the reading and writing subtests were included. These students are allowed 70 minutes to complete one or both subtests. A total of 296 students retook the reading subtest, 205 students retook the writing subtest, and 140 students retook both the reading and writing subtests. It was concluded that, after adjustments were made for previous performance, students who were allowed 70 minutes to retake the CLAST reading or writing subtest outperformed students who had only 35 minutes to complete the test. It seems that the number of correct answers, rather than speed in responding, should be the major determinant in assessing whether a student is competent in reading and writing. Three data tables are included. (Author/TJH)

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AN EXAMINATION OF CLAST RETAKE PERFORMANCE: IS MORE TIME AN ADVANTAGE TO TEST TAKERS?

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An Examination of CLAST Retake Performance: Is More Time an Advantage to Test Takers?

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ABSTRACT. The appropriateness of using time limits when measuring students' competence is questionable. This study assessed whether students who had failed the College Level Academic Skills Test (CLAST) could improve their performance if allowed additional time on retaking the test. Because standardized time allotments for completing the CLAST subtests could not be altered for the study, only students retaking the reading and writing subtests were included. These students are allowed 70 minutes to complete one or both subtests. It was concluded that students allowed 70 minutes to retake the CLAST reading or writing subtest outperformed students who had only 35 minutes after adjustments were made for previous performance.

One of the most persistent questions regarding the College Level Academic Skills Test (CLAST) has been whether students have a sufficient amount of time to complete the tasks in each of the four subtests. Since the CLAST is a competency-based examination, knowledge and skill--rather than speed in responding--should determine the test score. This is particularly important for a test used to make major life decisions.

Both student completion rates and students' perceptions of inadequate time for completing the

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tests appear to be factors with the CLAST. Several studies revealed that black non-Hispanics are not likely to complete the CLAST reading subtest (Belcher, 1984; Belcher, 1985).

Students believe that more time would help them pass the CLAST. First-time test takers at Miami-Dade Community College were asked if more time would have helped them do better in reading/writing, computation, and the essay. Of those responding, 74% agreed that more time would have helped in reading/writing, 61% believed that more time would help on the essay, and 48% would have liked more time on computation (Wright, 1986). A follow-up of a group of students who failed one or more parts of the CLAST revealed that most believed insufficient time to complete the test contributed to their low scores (Belcher, 1986).

Previous studies on the effects of extending time limits have mixed results. Using standardized examinations for admission to graduate school, providing increased time did not improve minority student performance any more than it did for other groups (Evans and Reilly, 1972; Evans and Reilly, 1973; Wild, Durso, and Rubin, 1982). With tests designed for lower academic levels, however, increased time resulted in better performance for students who perform poorly on placement tests (Daly and Stahman, 1968; Immerman, 1980). Since the CLAST is a test of basic competencies at the undergraduate level, it might be expected that allowing additional time would make a difference.

A study commissioned by the State of Florida to investigate the adequacy of timing on the CLAST concluded, however, that allowing additional time made little difference in test performance (Gallagher et al., 1985). First-time test takers were assigned to receive an extra 20 minutes, 10 minutes, or no additional time on each subtest. The experiment was repeated twice (Fall 1984 and Spring 1985), once with a sample of students at FIU and again with a sample of students from Miami-Dade and FIU. Separate analyses

were performed for each sample, even though results were hampered by the small number of students classified as "Black" or "Other." Results from both studies indicated that students with more time had higher essay scores but that more time did not improve scores on any other subtest. No interactions were found between amount of time allowed and ethnic membership, indicating that bias was not present.

Though the authors conclude that "further investigation in this area will not be useful" (Gallagher et al., 1985, p. 20), several areas remain unaddressed. On the technical side of the study, the authors did not discuss the problem of unequal group sizes in a two-way analysis of variance. If, in fact, they ignored this problem, the results could be seriously distorted. In addition, the authors presented no post hoc statistical test of the means when a significant main effect was found. Sample sizes also limited the conclusions, especially when analyzing pass/fail rates on the subtests.

A reanalysis of the March, 1985, data by Younkin (1986) addressed the statistical weaknesses of the previous study and reformed the groups on a different ethnic dimension. Younkin chose to study the effects of extra time on native and non-native speakers of English, where non-native speakers were students who reported that English was not the major language spoken at home. He found that providing extra time was helpful to all students on the writing subtest and the essay. More time was differentially helpful to non-native English speakers on the computation subtest. Significant effects were also found on the reading subtest, but not in the direction predicted.

Even if we conclude that bias is not present in the timing limits of the CLAST, a more general question remains of whether a sample of first-time test takers (most passed the CLAST and entered college with adequate SAT scores) are representative of <u>all</u> test takers. In particular, would students who need to retake one or more sections of the CLAST benefit

from extra time? Students who fail the CLAST, especially the essay, tend to be Black, Hispanic, or non-native English speakers. Perhaps extra time would benefit students retaking the test.

Purpose of the Study

The purpose of this study was to investigate whether the time allotted for completing either the reading or writing subtest affected students' performance. The following time allotments currently exist for CLAST retake exams: retake reading only, 70 minutes; retake writing only, 70 minutes; retake both reading and writing, 35 minutes each. Thus, students retaking only one subtest are given twice as much time as students retaking both tests.

The questions under study were:

1. Do students given 70 minutes to retake the CLAST reading subtest outperform students given only 35 minutes to retake the reading test?
2. Do students given 70 minutes to retake the CLAST writing subtest outperform students given only 35 minutes to retake the writing test?

Methodology

Sample

The students included in this study where those who took the CLAST from Fall 1982 through Fall 1986 at Miami-Dade Community College. Students with at least two CLAST records were selected from the files, and each student's records were placed in chronological order. Next, the first-time record was selected for inclusion if the student completed all four subtests. The first retake record for these students was reviewed to determine whether the student retook the reading, the writing, or both the reading and writing subtests. Using this information, students were sorted

into three groups: those who retook reading only, those who retook writing only, and those who retook reading and writing. Finally, each student's original and retake scores were compared. Those students whose retake scores differed from their original scores by two or more standard deviations were eliminated form consideration on the assumption that one of the scores contained some type of measurement error. There were 641 records that met the criteria for inclusion: 296 students retook reading, 205 students retook writing, and 140 students retook both reading and writing.

Design

Since students retaking only one subtest may have had greater skill in the communication area than those who needed to retake both, possible differences in achievement were controlled by covarying initial CLAST scores on each subtest.

Two analyses were performed. The first compared the reading scores of students retaking reading only (70 minutes) with the reading scores of students retaking both reading (35 minutes) and writing subtests. The second compared the writing scores of students retaking the writing subtest only (70 minutes) with the writing scores of students retaking both writing (35 minutes) and reading subtests. For these analyses, group membership was the independent variable, original CLAST score in either reading or writing was the covariate, and retake CLAST score was the dependent variable.

The major assumptions of random assignment of students to groups and normal distribution of scores could not be met in this study. However, the assumption of parallel regression lines was tested, and results indicated that this assumption was met for both analyses.

Results

Students included in the study of CLAST retakers could be described as predominantly female, minority, and non-native English speakers. Among the three study groups, these proportions varied somewhat, especially by native language as illustrated in Table 1.

Table 1 Percentage of Students Retaking the CLAST by Membership and Study Group

		Study Groups Retaking Tests		
Membership	Total	Reading Only	Writing Only	Reading/ Writing
Female	53	56	47	54
Hispanic	58	58	66	51
Black	27	27	20	32
Non-Native English	68	68	58	74
N =	641	296	205	140

In reading, having the extra time on the test resulted in a 15 point improvement after CLAST retake scores had been adjusted. This result was statistically significant ($F = 65.51$; $p < .01$). The two groups were only five points apart on the first administration, and the adjustment made little difference in mean scores (See Table 2).

In writing, a similar result was found. Students who had the entire 70 minutes to complete the writing test had adjusted writing scores that were nine points higher than students who completed both tests in the same amount of time ($F = 22.7$; $p < .01$). Again, the difference of four points between the groups had been much smaller on the first administration (See Table 3).

Table 2 Comparison of Students Retaking the Reading Subtest with Students Retaking Both the Reading and Writing Subtests

ANALYSIS OF COVARIANCE

Source	Sum of Squares	df	Mean Square	F	p > F
Model	62261.68	2	3110.084	101.73	.0001
Error	132499.24	433	306.003		
Corrected Total	194760.92	435			

Root MSE,17.49; R-Square,0.3197; Adj. R-Square,0.3165

Parameter Estimates

Variable	df	Parameter Estimate	Std. Error	T for H_0: Parameter=0	p>ITI
Intercept	1	110.76	17.59	6.30	.0001
Orgread	1	0.60	0.07	8.42	.0001
Group	1	18.78	1.81	10.39	.0001

Regression Equation: y' = 110.76 + .60 + 18.78

MEANS

Group	Adm.	N	Mean	SD	SEM	ADJ. MEANS	F 1,433
Reading	1st	296	249.84	10.00	0.58		
	2nd	297	278.19	24.29	1.41	277.58	65.51*
Reading/ Writing	1st	140	246.71	15.00	1.26		
	2nd	148	261.06	23.39	1.92	262.33	

* p < .01

Table 3 Comparison of Students Retaking the Writing Subtest with Students Retaking Both the Reading and Writing Subtests

ANALYSIS OF COVARIANCE

Source	Sum of Squares	df	Mean Square	F	p > F
Model	29774.74	2	14887.37	43.98	.0001
Error	115769.45	324	338.51		
Corrected Total	145544.19	344			

Root MSE, 18.40; R-Square, 0.20; Adj. R-Square, 0.20

Parameter Estimates

Variable	df	Parameter Estimate	Std. Error	T for H_0: Parameter=0	p>ITI
Intercept	1	137.75	19.84	6.94	.0001
Orgwrit	1	0.51	0.08	6.50	.0001
Group	1	11.90	2.03	5.85	.0001

Regression Equation: y' = 137.75 + .51 + 11.90

MEANS

Group	Adm.	N	Mean	SD	SEM	ADJ. MEANS	F 1.342
Writing	1st	205	256.58	9.39	0.66		
	2nd	205	280.04	19.47	1.36	279.34	22.7*
Reading/ Writing	1st	140	253.17	16.42	1.39		
	2nd	148	268.02	21.88	1.80	270.05	

* p < .01

Discussion

In this study, retake students given 70 minutes to complete the reading or writing portions of the CLAST had a definite advantage over retake students who completed both tests in 70 minutes. In fact, students retaking both sections of the tests could probably benefit from the counsel to concentrate on only one of the tests during the session. This advice might be particularly valuable on the reading test which revealed a greater improvement and follows the writing subtest in the test booklets and directions.

This study confirms that allowing extra time makes a difference for a group of students who do not do well on tests. It seems that the number of answers correct rather than speed in responding should be the major determinant in assessing whether a student is competent in reading and writing.

This study is hampered by the fact that it was based on naturally occurring groups. In addition, it only addressed the reading and writing subtests; previous work indicated that computation (Younkin, 1986) and essay scores might improve with more time (Gallagher et al., 1985; Younkin, 1986). Surely the issue of time limits needs to be readdressed, especially for students who must retake the CLAST.

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